

NON-VOLATILE SONOS MEMORY DEVICE AND METHOD FOR MANUFACTURING THE SAME

ABSTRACT OF THE DISCLOSURE

5 A non-volatile SONOS memory device includes a semiconductor
substrate having a source region and a drain region. A channel is
formed between the source region and the drain region. A gate
insulation layer including a nitride layer is formed over the channel, and
a gate is formed over the gate insulation layer. The channel is a stepped
10 channel including a top part, an inclined part and a bottom part. The
nitride layer is formed over the inclined part and the bottom part, and the
top part of the channel is adjacent to the source region and the bottom
part of the channel is adjacent to the drain region